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15. [(Amended)] An electrolytic gold plating apparatus according to Claims 8 to 10 and 14, which comprises:

an automatic adding solution supply unit for adding said plating solution based on a value obtained by measuring at least one of an amount of gold colloid of said plating solution, a value of pH of said plating solution, a concentration of sulfurous acid in gold sulfite complex of said plating solution and a concentration of sulfuric acid of said plating solution;

an automatic pH adjustment unit for adjusting pH; and

an automatic water supply unit for supplying water for evaporated water.

16. [(Amended)] An electrolytic gold plating apparatus according to Claims 8 to 10 and 14, which comprises:

an anode, an object to be plated and an opening portion in a plating bath, said anode being vertically arranged, said object to be plated being arranged opposite to said anode, said opening portion being arranged at a side surface portion of said plating bath;

a substrate stage for vacuum-holding said object to be plated, said substrate stage detachably attached to said plating bath in a state of blocking said opening portion; and

a pushing unit for pushing and releasing said substrate stage to and from said opening portion.